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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,187	10/09/2003	Yvon Cazaux	S1022.81052US00	7293
23628	7590	04/28/2005	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2211			ELLIS, SUEZU Y	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/682,187

Applicant(s)

CAZAUX ET AL.

Examiner

Suezu Ellis

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on October 16, 2002. It is noted, however, that applicant has not filed a certified copy of the 02/12851 application as required by 35 U.S.C. 119(b).

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on October 9, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1- 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the first level of determined average slope" in line 6. There is insufficient antecedent basis for this limitation in the claim. Further, it is unclear what a determined average slope is. Please clarify.

Regarding claim 6, line 6, it is unclear what a determined average slope is. Please clarify.

Claims not specifically addressed are indefinite due to their dependency.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Gowda et al. (US 5,898,168). Hereafter Gowda et al. will be referred to as Gowda.

Regarding claims 1, 6 and 7, Gowda discloses in Fig. 3B, an image cell comprising photodiodes that discharge into a read node via an FET (22). The image cell further comprises a signal (ROW SELECT) that switches the transistor off (first level – high potential) or switches the transistor on (second level – low potential) (col. 5, lines 13-44). He further discloses the low potential (first level) is typically zero volts, which is a constant thus when displayed in a graph, the level would be illustrated as having a slope of zero (Fig. 5). Gowda further discloses the ROW SELECT signal changes from high (second level) to low (first level) when the photocharge from the photodiode is being collected after the photodiode has been reset. Fig. 5 illustrates a slope that occurs as the signal changes levels.

Regarding claim 5, Gowda discloses the signals are applied to rows or columns of pixels (col. 5, lines 14-17).

Claims 6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nomoto (US 5,818,526).

Regarding claim 6, Nomoto discloses a solid state image pickup device comprising an array of pixels with switches (MOS transistors) for alternating rows to be read out. Although Nomoto fails to expressly disclose a read node and a photodiode, a photodiode is inherent to a pixel and a read node is inherent to the device since the device performs readout. Nomoto discloses a clock signal (functionally equivalent to a control signal) applied to the transistor to turn on or off the transistor. Fig. 8 illustrates the slope of the clock signal between transitions from the first level to the second level ("H" and "L" levels) (col. 7, lines 31-55).

Regarding claim 8, Nomoto further discloses in Fig. 8, an intermediary stage (readout potential) with a zero slope between the second level (reset potential) and the first level (nonselect potential) (col. 10, lines 3-24).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gowda et al. (US 5,898,168). Hereafter Gowda et al. will be referred to as Gowda.

Regarding claim 9, Gowda addresses all the limitations of claim 6. Gowda fails to disclose the duration of the transition of the control signal from the high level to the low level being greater than 50 ns. However, it would have been obvious to a person of ordinary skill in the art to modify the transition time to be greater than 50 ns since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

#### ***Allowable Subject Matter***

Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form and to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claim 2, prior art fails to teach or reasonably suggest a MOS transistor of a first conductivity type connected to a voltage source at the second level and to a control line wherein the control line is connected to the gate of the transfer MOS transistor, and a MOS transistor of a second conductivity type connected to the control line and to a terminal of a constant current source wherein the other terminal of the constant current source is connected to a voltage source at the first level.


Claims not specifically addressed would be allowable due to their dependency.

***Telephone/Fax Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is 571-272-2868. The examiner can normally be reached on 8:30am-7pm (Monday-Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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